

REMARKS

In the present application, claims 5-7, 12-14, and 19-21 are pending. Claims 5-7, 12-14, and 19-21 are rejected. Claims 6, 7, 13, 14, 20, and 21 are amended. As a result of this response, claims 5-7, 12-14, and 19-21 are in condition for allowance.

Claim Objections

The Examiner objected to claims 7, 14, and 21 as the result of various informalities. Specifically, the Examiner asserted that claims 6, 7, 13, 14, 20, and 21 “should state ‘said plurality of extend-to-new volume groups’”. These claims are amended herein in accordance with the Examiner’s instruction. As a result, the Examiner’s objections are respectfully traversed.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 5, 12, and 19 as being anticipated by Niles et al. (PGPUB: US 2003/0135709). The Examiner asserted that Niles discloses “selecting a new storage volume (by selecting a segment from volume B or C in the first storage group from the free list) from a first plurality of storage volumes that constitute a first storage group (first group comprised of volumes A, B and C in Figure 4, Reference 225) in response to encountering an end of a current storage volume (section 0085, lines 29-41 and section 0086); and if unsuccessful in selecting a new storage from the first storage group (unsuccessful when the end of an allocated disk area on a current drive has been reached; refer to section 0041), selecting another new storage volume from a second plurality of storage volumes that constitute a second storage group (storage volumes located on another physical drive, refer to section 0041); and linking the second group as an extend-to-new (expansion) volume group for end of volume encounters of the first plurality of storage volumes of the first group (section 0041, section 0038, lines 6-14, section 0047, lines 7-20).”

Applicants respectfully disagree with the Examiner’s characterization of the teachings of Niles et al. Specifically, Applicants respectfully submit that the Examiner is in error when equating the teachings of Niles et al. to the recited steps.

Claim 5 recites:

5. A method for reducing ABENDs in a data processing system when a job encounters an end of a current storage volume, said method comprising:

(a) in response to said encounter, selecting a new storage volume from a first plurality of storage volumes that constitute a first storage group;

(b) if step (a) is unsuccessful, selecting another new storage volume from a second plurality of storage volumes that constitute a second storage group; and

linking said second group as an extend-to-new volume group for end of volume encounters of said first plurality of storage volumes of said first group.

With reference to Claim 5, Applicants respectfully argue that Niles et al. fails to teach all of the recited steps. Quite simply, Niles et al. discloses adding storage to an existing volume but is silent with regards to extending to a new volume group as recited. Claim 5 clearly recites a series of steps to be performed utilizing three separate and distinct storage volumes. There is first recited **a current storage volume**. When a job encounters an end of the current storage volume, **a new storage volume from a first group** is selected. If such a selection is not successful, **a new storage volume from a second group** is selected and the second group is linked as an extend-to-new volume group for the first group.

In contrast, Niles et al. teaches, at the Examiner's citation at paragraph [0041], that when the descriptor exceeds the boundaries on the current physical drive it may be the case that "It reached the end of its allocated disk area on its current physical drive and another physical drive is already to continue its expansion ...". This situation can arise because, as Niles et al. discloses at paragraph [0011], "Volumes can be created at their maximum supported capacities without requiring the actual disk space to exist." Niles et al. therefore teaches an instance wherein, when the descriptor for a segment on a virtual storage device

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exceeds the boundaries of a current physical drive, there is another physical drive available to permit continued expansion. Put simply, when the space allocated to a virtual storage device requires more physical storage space, another physical drive is utilized to add storage to an existing volume.

It is therefore evident that Niles et al. fails to teach extension to a new volume as claimed. Rather, Niles et al. teaches adding additional physical storage space to an existing volume.

Furthermore, claim 5 recites that, when a job encounters an end of the current storage volume, **a new storage volume from a first group** is selected. If such a selection is not successful, **a new storage volume from a second group** is selected. As claimed, when the end of the current storage volume is encountered, two steps follow. Specifically, first, a new storage volume from a first group is selected. Second, if the selection of the new storage volume from the first group is unsuccessful, a new storage volume from a second group is selected and linking is performed. The Examiner erroneously cites paragraph [0041], describing the expansion utilizing a single other physical drive, twice. The Examiner asserts the citation once each for teaching both “selecting a new storage volume from a first plurality of storage volumes that constitute a **first storage group**” and “selecting another new storage volume from a second plurality of storage volumes that constitute a **second storage group**”. As recited, the first storage group and second storage group are separate and distinct elements. Twice repeating a single citation teaching a single element is not equivalent to a citation wherein there is taught two elements. In addition, as noted above, Niles et al.’s teaching of adding a physical disk drive to an existing volume is not equivalent to the recited selecting and extending to another group of volumes.

For the above stated reasons, Niles et al. fails to teach more than one recited element of claim 5. As such, Niles et al. clearly cannot anticipate claim 5 since “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As this is not the case, claim 5 is in condition for allowance. As claims 12 and 19 recite elements similar to

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those discussed above, for the reasons discussed above, claims 12 and 19 are similarly in condition for allowance.

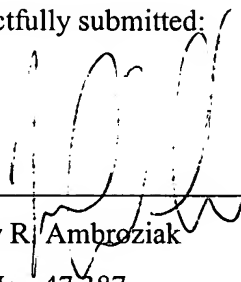
Claim Rejections – 35 USC § 103

The Examiner rejected claims 6-7, 13-14 and 20-21 as being unpatentable over Niles et al. In asserting these rejections, the Examiner cites no art other than Niles et al. As discussed above, claims 5, 12, and 19 are in condition for allowance. As all of claims 6-7, 13-14 and 20-21 depend upon claims 5, 12, and 19, they are likewise in condition for allowance.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

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